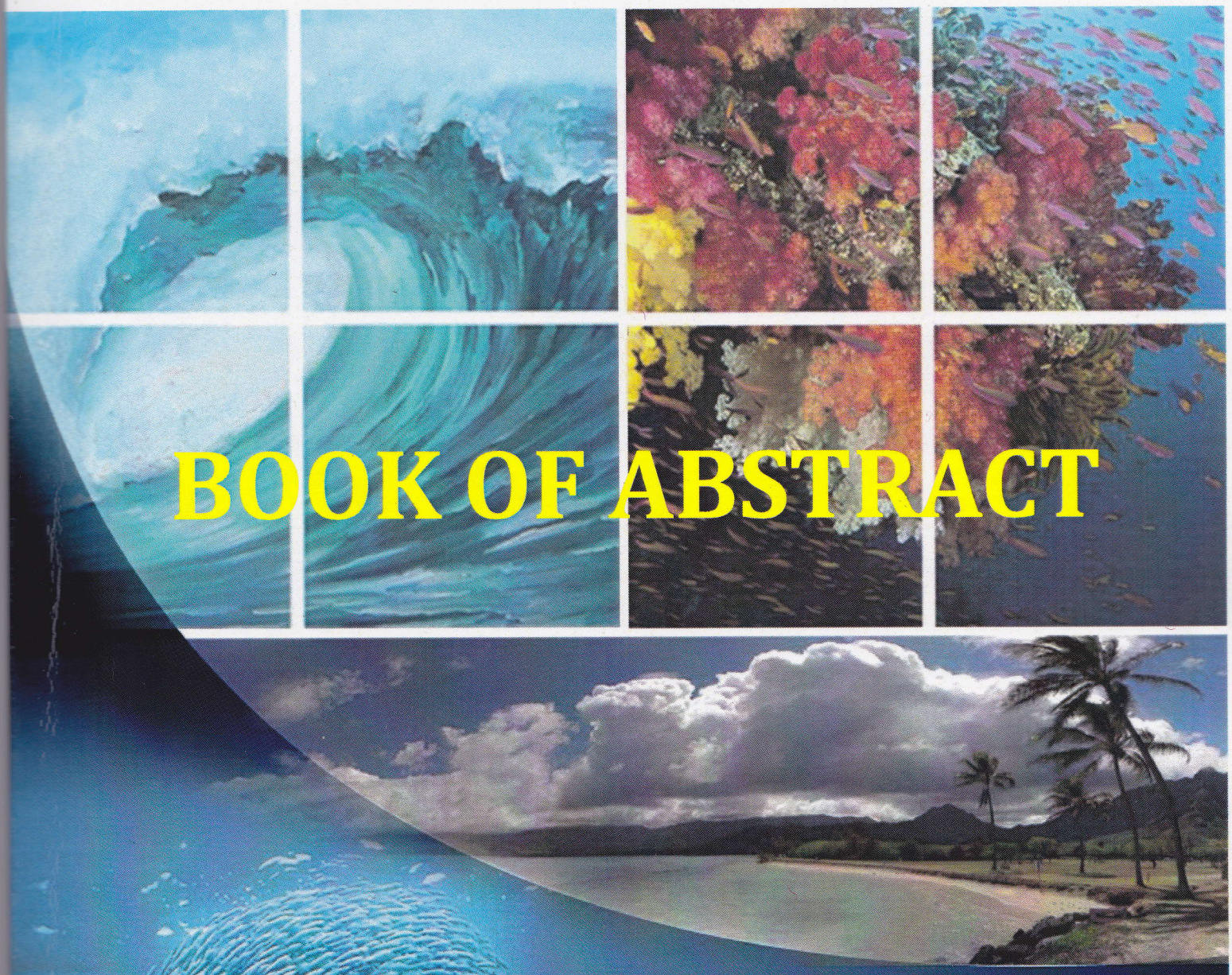

BOOK OF ABSTRACT

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Oral presentations

CHANGE IN NUMBER OF LOGGERHEAD TURTLE LANDINGS AT SELECTED SANDY BEACHES IN JAPAN

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ABSTRACT-Loggerhead turtle is an endangered marine species. The major landing beaches in Northern Pacific Ocean are concentrated in south part of Japan. Protection activities been conducted since 1950's in Hiwasa beach. It seems that the number of landing, which can apply an estimation of adult turtle number, is increasing, recently, however character of change in the number of landings for several decades is not clarified in detail. This paper describes character of change in loggerhead landing at some major turtle beaches in southern Japan. Then, to see a long term character of landings at different beaches in Japan, landing index is introduced as shown in eq.(1). Then, average landing index AL is calculated as shown in eq.(2), too.$L_i = L_{an,i} / \max(L_{an})$ (1);Where, L_i = Landing index at i^{th} beach, $L_{an,i}$ = number of annual landings at i^{th} beach, and $\max(L_{an})$ = maximum number of annual landings at i^{th} beach. $AL = (1/n) \Sigma L_i$ (2). This total landing index clearly shows a periodic change of the landings. The maximum peaks can be seen at years of 1961, 1993, and 2005 and minimum peaks are in the years of 1980 and 1998. In addition, the later maximum peak is higher than former peaks. Total landing index AL is compared with other parameters such as the position of Kuroshio, amount of jellyfish, number of typhoons, and etc. Typhoon is not a cause of change in the landings, however the landing numbers of loggerhead turtles and typhoons shows reasonably good correlation (R=0.66). This means that much hatching sites and hatched eggs will be affected during high typhoon years if hatched sites (nests) and hatched eggs are not properly protected. It is concluded that site specific protection activities are important, as well as understanding of natural mechanism to cause a periodic change in the landing numbers such as the regime shift in the ocean. In addition, coastal engineers can assist to protect a hatching beach against beach erosion.

BIOFUEL POTENTIAL WITHIN *CHAETOCEROS* SPECIES (BACILLARIOPHYCEAE) FROM COASTAL WATER OF PAHANG, MALAYSIA

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ABSTRACT-Several marine diatoms have been known for their high lipid content. *Chaetoceros* is probably the largest genus of marine planktonic diatoms with approximately 400 species described. Lipid is important as primary storage for nutrient and essential for cell's growth and function. Nowadays, there are increasing in demands for alternative source of fuel with several attempts have been conducted to find the best ways for fatty acid collection and algae have been listed as potential sources for lipid. This study was aimed to analyze the production of fatty acids from marine algae under Genus *Chaetoceros*. The results showed three species had been identified as *Chaetoceros baculites*, *Chaetoceros anastomosans* and *Chaetoceros affinis var. willei*.*Chaetoceros baculites* had higher growth rate compared to other species mention earlier. All species had more than 40% of total lipid detected during exponential phase of their growth. Based on accumulation, *Chaetoceros baculites* had higher lipid percentage than other species followed by *Chaetoceros affinis var. willei* and lastly *Chaetoceros anastomosans*. This indicates that Genus *Chaetoceros* can be treated as potential sources for bio-fuel industry in Malaysia.